#14

RAW SEQUENCE LISTING DATE: 04/21/2003
PATENT APPLICATION: **US/09/905,743B** TIME: 13:14:11

Input Set : **N:\EBONY'S\EP.txt**
Output Set: **N:\CRF4\04212003\I905743B.raw**

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      3 <110> APPLICANT: Chadwick, Brian Paul
      4       Frischauf, Anna Maria
      6 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS RELATING TO CD39-LIKE POLYPEPTIDES
AND NUCLEIC
      7       ACIDS
      9 <130> FILE REFERENCE: 28110/36120C
     11 <140> CURRENT APPLICATION NUMBER: 09/905,743B
     12 <141> CURRENT FILING DATE: 2001-07-13
     14 <150> PRIOR APPLICATION NUMBER: 09/240,639
     15 <151> PRIOR FILING DATE: 1999-01-29
     17 <160> NUMBER OF SEQ ID NOS: 32
     19 <170> SOFTWARE: PatentIn version 3.1
     21 <210> SEQ ID NO: 1
     22 <211> LENGTH: 2762
     23 <212> TYPE: DNA
     24 <213> ORGANISM: Homo Sapiens
     26 <220> FEATURE:
     27 <221> NAME/KEY: CDS
     28 <222> LOCATION: (232)..(1599)
     29 <223> OTHER INFORMATION:
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     37 gcgcggtgca tggaatgggc tatgtgaatg aaaaaaggta tccgttatga aacttccaga    180
     39 aaaacgagct acatttttca gcagccgcag cacggtcctt ggcaaacaag g atg aga     237
     40                                                        Met Arg
     41                                                        1
     43 aaa ata tcc aac cac ggg agc ctg cgg gtg gcg aag gtg gca tac ccc      285
     44 Lys Ile Ser Asn His Gly Ser Leu Arg Val Ala Lys Val Ala Tyr Pro
     45         5                  10                  15
     47 ctg ggg ctg tgt gtg ggc gtg ttc atc tat gtt gcc tac atc aag tgg      333
     48 Leu Gly Leu Cys Val Gly Val Phe Ile Tyr Val Ala Tyr Ile Lys Trp
     49     20                  25                  30
     51 cac cgg gcc acc gcc acc cag gcc ttc ttc agc atc acc agg gca gcc      381
     52 His Arg Ala Thr Ala Thr Gln Ala Phe Phe Ser Ile Thr Arg Ala Ala
     53 35                  40                  45                  50
     55 ccg ggg gcc cgg tgg ggt cag cag gcc cac agc ccc ctg ggg aca gct      429
     56 Pro Gly Ala Arg Trp Gly Gln Gln Ala His Ser Pro Leu Gly Thr Ala
     57                 55                  60                  65
     59 gca gac ggg cac gag gtc ttc tac ggg atc atg ttt gat gca gga agc      477
     60 Ala Asp Gly His Glu Val Phe Tyr Gly Ile Met Phe Asp Ala Gly Ser
     61             70                  75                  80
     63 act ggc acc cga gta cac gtc ttc cag ttc acc cgg ccc ccc aga gaa      525
     64 Thr Gly Thr Arg Val His Val Phe Gln Phe Thr Arg Pro Pro Arg Glu
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Input Set : N:\EBONY'S\EP.txt
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65          85                  90                  95
67 act ccc acg tta acc cac gaa acc ttc aaa gca gtg aag cca ggt ctt      573
68 Thr Pro Thr Leu Thr His Glu Thr Phe Lys Ala Val Lys Pro Gly Leu
69     100                 105                 110
71 tct gcc tat gct gat gat gtt gaa aag agc gct cag gga atc cgg gaa      621
72 Ser Ala Tyr Ala Asp Asp Val Glu Lys Ser Ala Gln Gly Ile Arg Glu
73 115                 120                 125                 130
75 cta ctg gat gtt gct aaa cag gac att ccg ttc gac ttc tgg aag gcc      669
76 Leu Leu Asp Val Ala Lys Gln Asp Ile Pro Phe Asp Phe Trp Lys Ala
77                 135                 140                 145
79 acc cct ctg gtc ctc aag gcc aca gct ggc tta cgc ctg tta cct gga      717
80 Thr Pro Leu Val Leu Lys Ala Thr Ala Gly Leu Arg Leu Leu Pro Gly
81             150                 155                 160
83 gaa aag gcc cag aag tta ctg cag aag gtg aaa gaa gta ttt aaa gca      765
84 Glu Lys Ala Gln Lys Leu Leu Gln Lys Val Lys Glu Val Phe Lys Ala
85         165                 170                 175
87 tcg cct ttc ctt gta ggg gat gac tgt gtt tcc atc atg aac gga aca      813
88 Ser Pro Phe Leu Val Gly Asp Asp Cys Val Ser Ile Met Asn Gly Thr
89     180                 185                 190
91 gat gaa ggc gtt tcg gcg tgg atc acc atc aac ttc ctg aca ggc agc      861
92 Asp Glu Gly Val Ser Ala Trp Ile Thr Ile Asn Phe Leu Thr Gly Ser
93 195                 200                 205                 210
95 ttg aaa act cca gga ggg agc agc gtg ggc atg ctg gac ttg ggc gga      909
96 Leu Lys Thr Pro Gly Gly Ser Ser Val Gly Met Leu Asp Leu Gly Gly
97                 215                 220                 225
99 gga tcc act cag atc gcc ttc ctg cca cgc gtg gag ggc acc ctg cag      957
100 Gly Ser Thr Gln Ile Ala Phe Leu Pro Arg Val Glu Gly Thr Leu Gln
101             230                 235                 240
103 gcc tcc cca ccc ggc tac ctg acg gca ctg cgg atg ttt aac agg acc     1005
104 Ala Ser Pro Pro Gly Tyr Leu Thr Ala Leu Arg Met Phe Asn Arg Thr
105         245                 250                 255
107 tac aag ctc tat tcc tac agc tac ctc ggg ctc ggg ctg atg tcg gca     1053
108 Tyr Lys Leu Tyr Ser Tyr Ser Tyr Leu Gly Leu Gly Leu Met Ser Ala
109     260                 265                 270
111 cgc ctg gcg atc ctg ggc ggc gtg gag ggg cag cct gct aag gat gga     1101
112 Arg Leu Ala Ile Leu Gly Gly Val Glu Gly Gln Pro Ala Lys Asp Gly
113 275                 280                 285                 290
115 aag gag ttg gtc agc cct tgc ttg tct ccc agt ttc aaa gga gag tgg     1149
116 Lys Glu Leu Val Ser Pro Cys Leu Ser Pro Ser Phe Lys Gly Glu Trp
117                 295                 300                 305
119 gaa cac gca gaa gtc acg tac agg gtt tca ggg cag aaa gca gcg gca     1197
120 Glu His Ala Glu Val Thr Tyr Arg Val Ser Gly Gln Lys Ala Ala Ala
121             310                 315                 320
123 agc ctg cac gag ctg tgt gct gcc aga gtg tca gag gtc ctt caa aac     1245
124 Ser Leu His Glu Leu Cys Ala Ala Arg Val Ser Glu Val Leu Gln Asn
125         325                 330                 335
127 aga gtg cac agg acg gag gaa gtg aag cat gtg gac ttc tat gct ttc     1293
128 Arg Val His Arg Thr Glu Glu Val Lys His Val Asp Phe Tyr Ala Phe
129     340                 345                 350
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Input Set : N:\EBONY'S\EP.txt
Output Set: N:\CRF4\04212003\I905743B.raw

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131 tcc tac tat tac gac ctt gca gct ggt gtg ggc ctc ata gat gcg gag     1341
132 Ser Tyr Tyr Tyr Asp Leu Ala Ala Gly Val Gly Leu Ile Asp Ala Glu
133 355                 360                 365                 370
135 aag gga ggc agc ctg gtg gtg ggg gac ttc gag atc gca gcc aag tac     1389
136 Lys Gly Gly Ser Leu Val Val Gly Asp Phe Glu Ile Ala Ala Lys Tyr
137                 375                 380                 385
139 gtg tgt cgg acc ctg gag aca cag ccg cag agc agc ccc ttc tca tgc     1437
140 Val Cys Arg Thr Leu Glu Thr Gln Pro Gln Ser Ser Pro Phe Ser Cys
141             390                 395                 400
143 atg gac ctc acc tac gtc agc ctg cta ctc cag gag ttc ggc ttt ccc     1485
144 Met Asp Leu Thr Tyr Val Ser Leu Leu Leu Gln Glu Phe Gly Phe Pro
145         405                 410                 415
147 agg agc aaa gtg ctg aag ctc act cgg aaa att gac aat gtt gag acc     1533
148 Arg Ser Lys Val Leu Lys Leu Thr Arg Lys Ile Asp Asn Val Glu Thr
149     420                 425                 430
151 agc tgg gct ctg ggg gcc att ttt cat tac atc gac tcc ctg aac aga     1581
152 Ser Trp Ala Leu Gly Ala Ile Phe His Tyr Ile Asp Ser Leu Asn Arg
153 435                 440                 445                 450
155 cag aag agt cca gcc tca tagtggccga gccatccctg tccccgtcag           1629
156 Gln Lys Ser Pro Ala Ser
157                 455
159 cagtgtctgt gtgtctgcat aaaccctcct gtcctggacg tgacttcatc ctgaggagcc   1689
161 acagcacagg ccgtgctggc actttctgca cactggctct gggacttgca gaaggcctgg   1749
163 tgctgccctg gcatcagcct cttccagtca catctggcca gagggctgtc tggacctggg   1809
165 ccctgctcaa tgccacctgt ctgcctgggc tccaagtggg caggaccagg acagaaccac   1869
167 aggcacacac tgaggggca gtgtggctcc ctgcctgtcc catccccatg ccccgtccgc   1929
169 ggggctgtgg ctgctgctgt gcatgtccct gcgatgggag tcttgtctcc cagcctgtca   1989
171 gtttcctccc cagggcagag ctccccttcc tgcaagagtc tgggaggcgg tgcaggctgt   2049
173 cctggctgct ctggggaagc cgagggacag ccataacacc cccgggacag taggtctggg   2109
175 cggcaccact gggaactctg gacttgagtg tgtttgctct tccttgggta tgaatgtgtg   2169
177 agttcaccca gaggcctgct ctcctcacac attgtgtggt ttggggttaa tgatggaggg   2229
179 agacacctct tcatagacgg caggtgccca cctttcaggg agtctcccag catgggcgga   2289
181 tgccgggcat gagctgctgt aaactatttg tggctgtgct gcttgagtga cgtctctgtc   2349
183 gtgtgggtgc caagtgcttg tgtagaaact gtgttctgag ccccctttc tggacaccaa   2409
185 ctgtgtcctg tgaatgtatc gctactgtga gctgttcccg cctagccagg gccatgtctt   2469
187 aggtgcagct gtgccacggg tcagctgagc cacagtccca gaaccaagct ctcggtgtct   2529
189 cgggccacca tccgcccacc tcgggctgac cccacctcct ccatggacag tgtgagcccc   2589
191 gggccgtgca tcctgctcag tgtggcgtca gtgtcggggc tgagcccctt gagctgcttc   2649
193 agtgaatgta cagtgcccgg cacgagctga acctcatgtg ttccactccc aataaaaggt   2709
195 tgacaggggc ttctccttca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa         2762
198 <210> SEQ ID NO: 2
199 <211> LENGTH: 456
200 <212> TYPE: PRT
201 <213> ORGANISM: Homo Sapiens
203 <400> SEQUENCE: 2
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206 1               5                   10                  15
209 Tyr Pro Leu Gly Leu Cys Val Gly Val Phe Ile Tyr Val Ala Tyr Ile
210             20                  25                  30
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RAW SEQUENCE LISTING DATE: 04/21/2003
PATENT APPLICATION: US/09/905,743B TIME: 13:14:11

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Output Set: N:\CRF4\04212003\I905743B.raw

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213 Lys Trp His Arg Ala Thr Ala Thr Gln Ala Phe Phe Ser Ile Thr Arg
214         35                  40                  45
217 Ala Ala Pro Gly Ala Arg Trp Gly Gln Gln Ala His Ser Pro Leu Gly
218     50                  55                  60
221 Thr Ala Ala Asp Gly His Glu Val Phe Tyr Gly Ile Met Phe Asp Ala
222 65                  70                  75                  80
225 Gly Ser Thr Gly Thr Arg Val His Val Phe Gln Phe Thr Arg Pro Pro
226                 85                  90                  95
229 Arg Glu Thr Pro Thr Leu Thr His Glu Thr Phe Lys Ala Val Lys Pro
230             100                 105                 110
233 Gly Leu Ser Ala Tyr Ala Asp Asp Val Glu Lys Ser Ala Gln Gly Ile
234         115                 120                 125
237 Arg Glu Leu Leu Asp Val Ala Lys Gln Asp Ile Pro Phe Asp Phe Trp
238     130                 135                 140
241 Lys Ala Thr Pro Leu Val Leu Lys Ala Thr Ala Gly Leu Arg Leu Leu
242 145                 150                 155                 160
245 Pro Gly Glu Lys Ala Gln Lys Leu Leu Gln Lys Val Lys Glu Val Phe
246                 165                 170                 175
249 Lys Ala Ser Pro Phe Leu Val Gly Asp Asp Cys Val Ser Ile Met Asn
250             180                 185                 190
253 Gly Thr Asp Glu Gly Val Ser Ala Trp Ile Thr Ile Asn Phe Leu Thr
254         195                 200                 205
257 Gly Ser Leu Lys Thr Pro Gly Gly Ser Ser Val Gly Met Leu Asp Leu
258     210                 215                 220
261 Gly Gly Gly Ser Thr Gln Ile Ala Phe Leu Pro Arg Val Glu Gly Thr
262 225                 230                 235                 240
265 Leu Gln Ala Ser Pro Pro Gly Tyr Leu Thr Ala Leu Arg Met Phe Asn
266                 245                 250                 255
269 Arg Thr Tyr Lys Leu Tyr Ser Tyr Ser Tyr Leu Gly Leu Gly Leu Met
270             260                 265                 270
273 Ser Ala Arg Leu Ala Ile Leu Gly Gly Val Glu Gly Gln Pro Ala Lys
274         275                 280                 285
277 Asp Gly Lys Glu Leu Val Ser Pro Cys Leu Ser Pro Ser Phe Lys Gly
278     290                 295                 300
281 Glu Trp Glu His Ala Glu Val Thr Tyr Arg Val Ser Gly Gln Lys Ala
282 305                 310                 315                 320
285 Ala Ala Ser Leu His Glu Leu Cys Ala Ala Arg Val Ser Glu Val Leu
286                 325                 330                 335
289 Gln Asn Arg Val His Arg Thr Glu Glu Val Lys His Val Asp Phe Tyr
290             340                 345                 350
293 Ala Phe Ser Tyr Tyr Tyr Asp Leu Ala Ala Gly Val Gly Leu Ile Asp
294         355                 360                 365
297 Ala Glu Lys Gly Gly Ser Leu Val Val Gly Asp Phe Glu Ile Ala Ala
298     370                 375                 380
301 Lys Tyr Val Cys Arg Thr Leu Glu Thr Gln Pro Gln Ser Ser Pro Phe
302 385                 390                 395                 400
305 Ser Cys Met Asp Leu Thr Tyr Val Ser Leu Leu Leu Gln Glu Phe Gly
306                 405                 410                 415
309 Phe Pro Arg Ser Lys Val Leu Lys Leu Thr Arg Lys Ile Asp Asn Val
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RAW SEQUENCE LISTING DATE: 04/21/2003
PATENT APPLICATION: US/09/905,743B TIME: 13:14:11

Input Set : N:\EBONY'S\EP.txt
Output Set: N:\CRF4\04212003\I905743B.raw

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310             420                 425                 430
313 Glu Thr Ser Trp Ala Leu Gly Ala Ile Phe His Tyr Ile Asp Ser Leu
314         435                 440                 445
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318     450                 455
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322 <211> LENGTH: 2797
323 <212> TYPE: DNA
324 <213> ORGANISM: Homo Sapiens
326 <220> FEATURE:
327 <221> NAME/KEY: CDS
328 <222> LOCATION: (83)..(1669)
329 <223> OTHER INFORMATION:
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335 ctccgcacag ctaggagaaa ag atg ttc act gtg ctg acc cgc caa cca tgt     112
336                          Met Phe Thr Val Leu Thr Arg Gln Pro Cys
337                          1               5                   10
339 gag caa gca ggc ctc aag gcc ctc tac cga act cca acc atc att gcc     160
340 Glu Gln Ala Gly Leu Lys Ala Leu Tyr Arg Thr Pro Thr Ile Ile Ala
341                 15                  20                  25
343 ttg gtg gtc ttg ctt gtg agt att gtg gta ctt gtg agt atc act gtc     208
344 Leu Val Val Leu Leu Val Ser Ile Val Val Leu Val Ser Ile Thr Val
345             30                  35                  40
347 atc cag atc cac aag caa gag gtc ctc cct cca gga ctg aag tat ggt     256
348 Ile Gln Ile His Lys Gln Glu Val Leu Pro Pro Gly Leu Lys Tyr Gly
349         45                  50                  55
351 att gtg ctg gat gcc ggg tct tca aga acc aca gtc tac gtg tat caa     304
352 Ile Val Leu Asp Ala Gly Ser Ser Arg Thr Thr Val Tyr Val Tyr Gln
353     60                  65                  70
355 tgg cca gca gaa aaa gag aat aat acc gga gtg gtc agt caa acc ttc     352
356 Trp Pro Ala Glu Lys Glu Asn Asn Thr Gly Val Val Ser Gln Thr Phe
357 75                  80                  85                  90
359 aaa tgt agt gtg aaa ggc tct gga atc tcc agc tat gga aat aac ccc     400
360 Lys Cys Ser Val Lys Gly Ser Gly Ile Ser Ser Tyr Gly Asn Asn Pro
361                 95                  100                 105
363 caa gat gtc ccc aga gcc ttt gag gag tgt atg caa aaa gtc aag ggg     448
364 Gln Asp Val Pro Arg Ala Phe Glu Glu Cys Met Gln Lys Val Lys Gly
365             110                 115                 120
367 cag gtt cca tcc cac ctc cac gga tcc acc ccc att cac ctg gga gcc     496
368 Gln Val Pro Ser His Leu His Gly Ser Thr Pro Ile His Leu Gly Ala
369         125                 130                 135
371 acg gct ggg atg cgc ttg ctg agg ttg caa aat gaa aca gca gct aat     544
372 Thr Ala Gly Met Arg Leu Leu Arg Leu Gln Asn Glu Thr Ala Ala Asn
373     140                 145                 150
375 gaa gtc ctt gaa agc atc caa agc tac ttc aag tcc cag ccc ttt gac     592
376 Glu Val Leu Glu Ser Ile Gln Ser Tyr Phe Lys Ser Gln Pro Phe Asp
377 155                 160                 165                 170
379 ttt agg ggt gct caa atc att tct ggg caa gaa gaa ggg gta tat gga     640
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VERIFICATION SUMMARY DATE: 04/21/2003
PATENT APPLICATION: **US/09/905,743B** TIME: 13:14:12

Input Set : **N:\EBONY'S\EP.txt**
Output Set: **N:\CRF4\04212003\I905743B.raw**

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L:924 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:921